

REMARKS/ARGUMENTS

Claims 1-30, as originally filed, remain in this application.

This paper is filed in response to the Office Action dated October 28, 2003 (the "Office Action").

The current title has been changed as requested by the Examiner. The new title is: "Optical Data Signal Processing Method and Apparatus Using An All Optical Switch"

35 U.S.C. §103(a) Rejection of Claims

Reexamination and reconsideration of the claims are respectfully requested.

Claims 1-30 have been rejected for failing to meet the non-obviousness requirement under 35 U.S.C. §103(a) over Fee et al. and Barnsley. For the reasons recited below, applicants submit that the rejection should be reconsidered and withdrawn.

The crux of applicants' argument is quite simple. First, the claims require that the optical switches have, as their control input, optical signals. This requirement is repeated in each of the independent claims. Second, with regard to all of the dependent claims, each of the claims requires that the process or translation be such as to accept the protocol specification that includes a plurality of specifications of element input/output relationships, associating portions of the specification with control levels of electrical signals, and using the electrical signals to set the associated control levels for controlling at least some of the plurality of optical sources. Those sources are used to control, optically, the optical switches in order to achieve operating speeds far in excess of any speed available using electrical signals to control the optical switches directly.

Accordingly, a review of the Fee patent shows no use of the term "protocol specification", and only one use of the term "protocol", at column 6, line 58. This use of "protocol" has nothing to do with the protocol specification called for in the dependent claims

(except dependent claims 14 and 20-22 which require a unique first and second level processor structure not found in any of the references).

Furthermore, there is nothing in Fee, nor in Barnsley, which would suggest that the optical switches are optically controlled to provide a speed of operation a million times or more faster than that available with electrical control switches yielding the instructions for operating, directly, the optical switches. Indeed, in accordance with the operation described in the application, once the electrical control signals are applied in response to the protocol specification, the optical switch "circuitry" can operate to decode incoming optical signals, and reconfigure itself, optically, to provide a level of speed and functionality not dreamed of by Fee or others.

Accordingly, to suggest that optical switches with optical inputs are equivalent to the one input port, two-output port structure as illustrated by Fee is unsupported by the Fee description and operation. Fee's switches are controlled by electrical signals and are accordingly very slow compared to the optical signals. And further, the object of an optically controlled switch is very different than the object of the Fee switches controlled by electrical signals. The designs are different, the applications are different, and there is nothing in common between Fee and the claimed invention, and in particular where Fee, at column 6, lines 10-25 describes controller 312 as an electrical device, and at column 2, lines 66-67, and column 3, lines 1 and 2, notes that "a controller . . . is electrically connected to the optical switch for controlling via electrical signals the processing operation"

Considering in more detail the protocol specification requirement of the dependent claims (except 14 and 20-22 as noted above), there is again no relationship between providing communications having a protocol to enable the communications, and the protocol specification of the optical switch circuit in order to enable it to perform a function. The protocol specification referred to in the claims can only translate into electric signals the control for each switch, but it cannot define a device which will process the optical input signals in accordance with the specific protocol specification which defines the functions and processing to be optically enabled. The controller used by Fee is an example of a device in which the protocol

description does not generate the method of operation, but merely provides a sequential method for decoding input electrical signals to enable communications. For this reason, it is suggested, Fee never mentions "protocol specification" as a term in his patent. Other of the dependent claims expand upon and add to the protocol specification concept in a manner not taught, described or suggested by any of the cited references. And for all these reasons, it is respectfully submitted that all of the claims in the application should be passed to allowance in due course.


SUMMARY

Claims 1-30 are pending in the application.

Applicants request that the Examiner reconsider the application and claims in light of the foregoing Response, and respectfully submit that the claims, as amended, are in condition for allowance. If, in the Examiner's opinion, a telephonic interview would expedite the prosecution of the present application, the undersigned attorney would welcome the opportunity to discuss any outstanding issues, and to work with the Examiner toward placing the application in condition for allowance.

A petition for a three-month Extension of Time for Response to the Office Action of October 28, 2003, is submitted herewith. The Commissioner is hereby authorized to charge the fee for the three-month Extension of Time for Response, and any other fees now required to maintain the pendency of the application, to Deposit Account No. 08-0219.

Respectfully submitted,
HALE AND DORR, LLP

By 
Gary A. Walpert
Reg. No. 26,098

Date 28 April 2004
Hale and Dorr, LLP
60 State Street
Boston, MA 02109
Tel. (617) 526-6465
Fax. (617) 526-5000